

# Assisting Family Members with Technology in a Remote World



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## Motivation

The coronavirus pandemic imposed a dependence on technology unfamiliar to many, amplifying the need to learn new systems and troubleshoot problems.

## Aims

- To understand user behavior in the context of adult children assisting their parents with unfamiliar digital technologies
- To recommend improvements to digital technologies' capacity to support less confident users

## Methods

- 3 pairs of parents and adult children
- Naturalistic observations conducted over Zoom
- Participant-chosen desktop-based tasks the parents needed assistance with from their child
- Natural communication between participants throughout interaction

## Key results

Adult children more readily deployed resilience strategies, transferring their comfort using technology to unfamiliar systems and communicating with their parents to avoid errors.

Adult children filtered interface feedback into task-centered language, helping their parents understand the result of an action, reassuring them, and prompting them to continue.

## Design principles to support less confident users

Anticipate common errors and make the resilient action evident to reduce anxiety around making mistakes.

Include hints, descriptions, or tooltips written from the user's perspective to communicate the purpose of an interface element where users need confirmation.

Data was analyzed through two theoretical Human-Computer Interaction frameworks:

## Resilience Strategy

Tangible behaviors users proactively take to avoid mistakes and maintain performance when using technology.

*Understanding how younger users' resilience strategies compensate for older users' susceptibility to errors promotes understanding of older users' needs and informs principles for supporting less confident users.*

## Distributed Cognition of Teams (DiCoT)

How a pair of users with a common purpose interact with technology.

*Principles for designing technologies that enable helping others with technology without needing to be in the same physical space are informed by the context in which users collaboratively accomplish their goals.*